

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-3, 5-7, 9-11, and 13-15 are pending in this case. Claims 1-3, 5-7, and 9-11 are amended, Claims 4, 8, and 12 are cancelled, without prejudice or disclaimer, and Claims 13-15 are added by the present amendment. The changes to Claims 1-3, 5-7, and 9-11 are made for clarity and with support from the originally filed disclosure at least Figures 11-13 and at page 23, line 33, to page 28, line 4. New Claims 13-15 are supported by originally filed Claims 1, 5, and 9 and with support from the originally filed disclosure at least at page 9, lines 4-31. Thus, no new matter is added.

In the outstanding Office Action, the Drawings were objected to, the Specification was objected to, Claims 1, 4, 5, 9, and 10 were objected to, Claims 1-12 were rejected under 35 U.S.C. § 112, second paragraph, Claims 1-4, and 9-12 were rejected under 35 U.S.C. § 101, Claims 1-5, 7-9, 11, and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Suzuki, et al. (“Arrayed Air Jet Based Haptic Display: Implementing An Untethered Interface”, NTT Cyber Space Laboratories, NTT Corporation; herein “Suzuki”), and Claims 6 and 10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Suzuki in view of Iwaki, et al. (JP Pub. No. 2004-157677, herein “Iwaki”).

The Specification was amended in view of the Examiner’s suggestions and to describe steps S21, S22, S26, and S27 of Figure 16. Support for the description of steps S21, S22, S26, and S27 is found at pages 13 and 14 of the originally filed disclosure. In light of the amendments to the Specification, Applicants respectfully request that the objection to the Drawings and the objection to the Specification be withdrawn.

In light of the amendments to the Claims, the informalities noted by the Examiner in the outstanding Office Action have been corrected, and, thus, Applicants respectfully request that the claim objections be withdrawn.

Response to Rejection under 35 U.S.C. § 101:

Claims 1-3 were rejected under 35 U.S.C. § 101 for overlapping two different statutory classes of invention.

In light of the amendment to Claim 1, Applicants respectfully request that the rejection under 35 U.S.C. § 101 of Claim 1 and Claims 2 and 3, which depend therefrom, be withdrawn.

Claims 9-11 were rejected under 35 U.S.C. § 101 for overlapping two different statutory classes of invention and for claiming a computer program *per se*.

In light of the amendment to Claim 9, Applicants respectfully request that the rejection under 35 U.S.C. § 101 of Claim 9 and Claims 10 and 11, which depend therefrom, be withdrawn.

Response to Rejection under 35 U.S.C. § 112, second paragraph:

Claims 1-3, 5-7, and 9-11 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for overlapping two different statutory classes of invention.

In light of the above-noted amendments to Claims 1 and 9, Applicants respectfully request that the rejection of Claims 1-3, 5-7, and 9-11, under 35 U.S.C. § 112, second paragraph, be withdrawn.

Response to Rejections under 35 U.S.C. § 102(b) and § 103(a):

At the outset, Applicants note that Suzuki describes only what is described in the Background Art of the application and illustrated at Figure 19 of the application.

Suzuki illustrates, at Figure 1, a force feedback haptic interface operating by nozzles which provide air jets to “impact” a human interface air receiver and create a haptic display. However, Suzuki specifically states, at the bottom of page 2, column 1, that “**horizontal force . . . is not provided in the . . . implementation.**”

The claimed invention recites the horizontal force which Suzuki describes as being deficient.

Amended Claim 1 recites, *inter alia*, “jetting a gas or a liquid from the selected nozzle upon an inclined side surface unit of the receiver **to convey a force in a direction perpendicular to a direction of the jetting gas or liquid**” and “**an angle difference between a first direction** from each candidate nozzle to the center axis of the receiver and **a second direction** of a force to be provided to the receiver is equal to or less than a predetermined value, the **first direction and the second direction being perpendicular to the direction of the jetting gas or liquid.**”

As discussed above, Suzuki does not describe “jetting a gas or a liquid . . . **to convey a force in a direction perpendicular to a direction of the jetting gas or liquid,**” as recited by Claim 1, because Suzuki describes a force feedback haptic interface **in which no horizontal force is provided**. That is, when Suzuki describes that no horizontal force is provided, Suzuki describes that no “force in a direction perpendicular to the direction of the jetting gas or liquid,” as recited by Claim 1, is provided.

Further, Suzuki does not describe that “**an angle difference between a first direction** from each candidate nozzle to the center axis of the receiver and **a second direction** of a force to be provided to the receiver is equal to or less than a predetermined value, the **first**

**direction and the second direction being perpendicular to the direction of the jetting gas or liquid,”** as defined by Claim 1.

For instance, as illustrated in the example embodiment of Figure 13, Figure 13 illustrates an angle  $\theta_{ij}$  between (1) a first direction  $V_{PN}$  from a candidate nozzle  $N_{ij}$  to a center axis P of a receiver 1 and (2) a second direction  $V_f$  of a force to be provided to the receiver 1 wherein the direction of both (1) and (2) are perpendicular to a direction of jetting gas or liquid (i.e., see jet air 601 of example embodiment Figure 2 for an illustration of the direction of jetting gas).

However, Suzuki is silent as to the above-recited angle difference of each candidate nozzle of Claim 1.

Thus, because Suzuki does not describe at least the above-discussed features of Claim 1, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) of Claim 1, and Claims 2 and 3, which depend therefrom, be withdrawn.

Claims 5 and 9, although differing in scope and/or statutory class from Claim 1, patentably define over Suzuki for reasons similar to those discussed above with regard to Claim 1. Thus, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) of Claim 5, and Claim 7, which depends therefrom, and Claim 9, and Claim 11, which depends therefrom, be withdrawn.

Further, Claims 6 and 10 depend upon Claims 5 and 9, respectively. Iwaki, which is additionally asserted against Claims 6 and 10, fails to cure the above-discussed deficiencies of Suzuki with regard to Claims 5 and 9 and is not asserted for the features of Claims 5 and 9 that are discussed above as deficient in Suzuki. Thus, Applicants respectfully request that the rejection of Claims 6 and 10, under 35 U.S.C. § 103(a), be withdrawn.

New Claim 13 recites, *inter alia*, “an inclined side surface of the receiver **to convey a force in a direction perpendicular to the direction of the jetting gas or liquid.**”

However, discussed with regard to Claim 1, Suzuki does not “**convey a force in a direction perpendicular to the direction of the jetting gas or liquid**,” as recited by Claim 13. Specifically, the air receiver illustrated in Figure 1 of Suzuki does not illustrate a center unit **and an inclined side unit**. Instead, it only illustrates the same background art air receiver with **only a center unit** as is illustrated in background art Figure 19 of the application. Thus, with no inclined side unit, Suzuki could not “**convey a force in a direction perpendicular to the direction of the jetting gas or liquid**,” as recited by Claim 13.

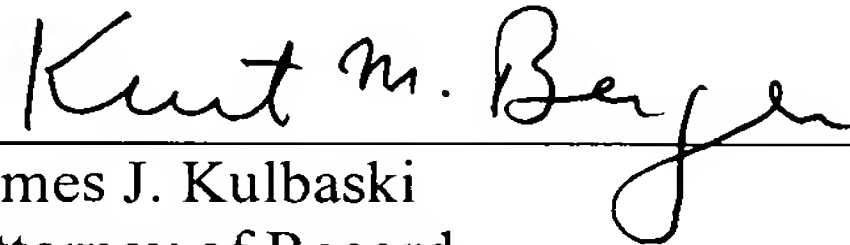
Further, Iwaki fails to cure the above-discussed deficiencies of Suzuki because Iwaki is silent as to conveying a force perpendicular to a direction of jetting gas or liquid and was not asserted to teach conveying a force perpendicular to a direction of jetting gas or liquid as discussed above. Accordingly, Claim 13 patently defines over Suzuki and Iwaki.

Claims 14 and 15, although differing in scope and/or statutory class from Claim 13, patentably define over Suzuki and Iwaki for similar reasons as those discussed above with regard to Claim 13.

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, L.L.P.



James J. Kulbaski  
Attorney of Record  
Registration No. 34,648

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 07/09)

Usha Munukutla-Parker  
Registration No. 61,939

Kurt M. Berger, Ph.D.  
Registration No. 51.461